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RE: Comments on Draft SWMI Framework

Dear Ms. Baskin,

I am writing on behalf of the Neponset River Watershed Association (the Association) to offer comments and recommendations regarding the Commonwealth's draft Sustainable Water Management Initiative (SWMI) framework document.

**Background**

We commend EEA, its agencies and its partners such as USGS for the quality and innovation of the scientific research that underpins the SWMI framework. This strong foundation of peer-reviewed science—arguably more robust than that being employed by any other U.S. state—makes it possible for the first time to begin to meaningfully address the challenge of developing a sensible water allocation policy for Massachusetts, and for the first time holds out at least the possibility of achieving the balancing of competing needs outlined in the Water Management Act so many years ago.

We would also like to thank the agency management and staff and many other participating partners for the thousands of hours they have invested in the SWMI process over the last several years. While the process has at times been contentious and difficult, it is essential that the issues raised during the SWMI process be handled thoroughly and thoughtfully if the citizens of the Commonwealth are to reap the benefits of clean, reliable and sustainable water resources in the decades ahead.

Lastly, we would point out that the efforts to date have focused largely on reforming decision making under the Water Management Act. While this is a vitally important first step, it leaves unaddressed many other areas of state jurisdiction which must be considered if we are to achieve sustainable water management in Massachusetts. We would therefore urge EEA to continue working to address other areas of water policy even as you move forward with reforms under the Water Management Act (WMA).

**Safe Yield**

Safe Yield is one of the core concepts in the Water Management Act, providing the ultimate, statutory guarantee that our water resources will be

able to meet essential needs for both human use and habitat during times of drought. The Association is deeply disappointed by the proposed handling of Safe Yield in the SWMI framework. We believe that the current Safe Yield proposal is not a reasonable use of the state's discretion in interpreting the WMA's statutory requirements, that the current proposal is not based on any meaningful application of scientific principles, and that it will not serve any useful role in protecting either water supply reliability or the environment. As a result, we anticipate the proposed Safe Yield methodology will ultimately be struck down by the courts, which could upset the entire SWMI framework that EEA has worked so hard to create.

The proposed Safe Yield is established at too large a geographic scale and therefore does nothing to protect stream flows or water supplies, particularly in headwater areas. The WMA defines Safe Yield in terms of withdrawals from "a water source." It defines a water source as:

"any natural or artificial aquifer or body of surface water, including its watershed where ground and surface water sources are interconnected in a single hydrological system."

Consulting an aquifer map, such as the attached example from the Neponset River Watershed (Exhibit 1) reveals that the Neponset Watershed contains at least nine hydrologically distinct aquifers that are used for water supply, a situation which is not unusual across the state. The Upper Mill Brook aquifer in Medfield is not hydrologically connected with the Steep Hill Brook aquifer in Stoughton. The amount of water that can be safely withdrawn from the Steep Hill Brook aquifer has no relationship whatsoever to the amount that can be withdrawn from the Fowl Meadow aquifer downstream. Setting a single Safe Yield number for these two unrelated water sources is incompatible with the language of the statute.

Furthermore, in some cases, the "basins" that are proposed to be assigned a single Safe Yield are not even part of the same watershed, and have no surface or ground water hydrological connection at all; for example a single Safe Yield is proposed for the Weir, Back, and Fore River watersheds, each of which flows not into one another, but into the ocean. These clearly do not have a single water source.

Lastly basing Safe Yield on the yearly average of monthly Q90 flows instead of the lowest single average monthly low flow also violates the statute. The statutory definition describes Safe Yield as the maximum dependable withdrawal that can be made "continuously from a water source during a period of years in which the probable driest period or period of greatest water deficiency is likely to occur." In the Neponset, as in most Massachusetts watersheds, the probable driest period is in August, and the proposed Safe Yield offers no scientific basis to suggest that the average of rolled up monthly drought flows is dependably available in August.

To address these deficiencies, EEA should define Safe Yields at a smaller scale, one that is tied to aquifers or surface water bodies which can be logically be considered as distinct water sources. At a minimum, the proposed large basin Safe Yields should be applied proportionately across each watershed using a volume per square mile method. We recognize that doing this will mean that in a number of areas, existing permits

and/or registrations will exceed Safe Yield. In these cases, the state can develop compliance plans to rectify these conflicts over the 20 year permit term. In addition, if Safe Yields will not be based on August water availability, they should be set on a monthly or at least seasonal basis to recognize that there is less water available in the summer than in other seasons, except in a few systems which have very large storage volumes.

### **Streamflow Criteria, Flow Levels and Biological Categories**

The proposed Flow Levels and Biological Categories are a very positive step forward, and are notable as being the pieces of the Framework which are clearly based on the available science. The Streamflow Criteria Chart for Flow Levels 1-3 give “% allowable alteration of estimated unimpacted median flow,” is also based on sound science. Unfortunately, the Streamflow Criteria Narrative, directly contradicts the Chart by permitting more than “allowable” alterations; i.e., it allows backsliding. This violates the “no backsliding” principle discussed repeatedly during SWMI discussions over the past two years.

For Flow Level 4 and 5 streams, it is not at all clear that “feasible mitigation and improvement” means that backsliding won’t be allowed to occur, much less that there will necessarily be any real improvement in these highly stressed streams. See discussion of “Minimization,” “Mitigation,” and other “Tier Requirements,” below.

A major problem with the Flow Levels as currently proposed is that they don’t incorporate the influence of two very significant factors: surface water withdrawals and sewer system infiltration and inflow (I/I). The importance of ignoring surface water withdrawals is obvious, but I/I can also reduce streamflows tremendously by diverting groundwater that would otherwise be expressed as streamflow. In the MWRA service areas, where detailed records have been kept for decades, I/I is widespread. In the Neponset River watershed, I/I represents 50% or more of the water in our sewers and is the equivalent of more than 10% of the river’s total annual freshwater discharge.

The state should move urgently to collect the additional data needed to address these shortcomings in the currently proposed Flow Levels and bring this information back to the SWMI process for consideration of how these issues should be incorporated into the framework. In many areas of the state, however, data is already available; as noted above, I/I data is available in the MWRA service area, and in some areas there is good data on the size of surface water withdrawals as well. In such cases, that data should be used by MassDEP during the permitting process to, when appropriate, revise the Flow Levels and/or Biological Categories of the affected stream prior to setting a water supplier’s allocation.

Also of great concern is the lack of a specific proposal for identifying Flow Levels, Biological Categories, and Streamflow Criteria for certain coastal watersheds, and again we urge the agencies to address this problem immediately, even if it means further delays in overdue permit renewals.

### **Baseline**

The Tier Classification System is a sensible approach to prioritizing the level of effort that the agencies should invest in permit review activities, by tying review effort and

mitigation requirements to the level of impact being proposed. However, we have several serious concerns with key details of the proposed Tier Classification and permitting process, and in particular the current Baseline proposal which undermines the principles of “no backsliding” and “feasible improvement”.

In the current proposal, to receive more than minimal (Tier 1) review, an application must exceed Baseline. So long as a requested withdrawal is below Baseline, the Tier Classification System effectively assumes that the request will not result in a substantial change in the existing Flow Level (i.e. existing impact), and therefore does not merit careful scrutiny or mitigation.

The Flow Level for a stream is derived from an analysis of water use during 2000-2004 and is used in effect as the definition of existing environmental impacts throughout the framework. The problem with the proposed Baseline is that there is not a consistent relationship between the Baseline volume and the 2000-2004 volume, and thus no consistent relationship between Baseline and the existing environmental impacts.

There are several reasons for this discrepancy. Baseline is derived from volumes withdrawn during one of several time periods which are different from those used to determine a stream’s Flow Level. In addition, baseline incorporates an arbitrary 5% to 8% increase, and also includes the even more arbitrary historical artifact of registered volumes, which MassDEP established in the absence of any environmental considerations. Taken together these factors build in an essentially random, and sometimes large, difference between baseline and a stream’s current Flow Level. This difference becomes problematic because the Tiers Table allows backsliding so long as a requested withdrawal is below Baseline.

When one aggregates Baselines from many permittees—as was done by MassDEP in the attached spreadsheet covering the Charles, Ipswich, Boston Harbor, and Parker (see Exhibit 2 taken from “baseline 2-17-2012 all basins.xls”)—the aggregated baselines seem to compare relatively favorably with the 2000-2004 water use data that was the basis of the Flow Levels for the same stream segments. As shown in Exhibit 2, the average 2000-2004 use in the Charles, Ipswich, Boston Harbor, and Parker is 49.13 MGD and the total proposed baseline is 53.14 MGD, an 8% increase.

However, when one disaggregates this data, one finds 34 individual Baselines behind the basin totals. Viewed individually (see Exhibit 3) these 34 Baselines run the gamut from 17% below to 71% above 2000-2004 use. The additional volumes that would be allocated without exceeding these 34 Baselines range from a reduction of 270,000 GPD to an increase of 650,000 GPD. In spite of this extraordinarily wide range of potential impacts, under the proposed Baseline definition, all these permittees would be treated equally in terms of permit review and mitigation effort.

In addition, a given increase in withdrawals will have differing levels of environmental impact in different streams. A given increase might have a large impact on a small headwater stream, whereas the same increase might have a negligible impact on a more robust main stem river.

Because the amount of “extra” water built into the proposed Baseline definition is so variable and because the impact that will result from that extra withdrawal is unrecognized in the existing framework, we believe the proposed Baseline methodology rises to the legal standard of being “arbitrary and capricious.”

An alternative approach to the current Baseline proposal would be to assign applicants to Tiers based solely on the percentage increase in August median flow depletion relative to 2000-2004 that they are requesting. This type of “impact based” approach to Tier Classification allows the state to make a policy decision as to the amount of increased impact that will be allowed with only Tier 1 review, something which is not possible under the current Baseline system. It would also ensure that all permittees would be required to undertake mitigation activities in proportion to the environmental impact their requested withdrawal would produce, rather than in proportion to arbitrary baseline values that are extremely variable and not necessarily aligned with environmental impact. The attached memo (Exhibit 4) which was submitted to MassDEP several months ago, lays out this proposal in greater detail. Note however that in this impact based approach, Tier 1 reviews would still need to be limited as to compliance volumes and water needs forecasts, to avoid rewarding permittees operating in violation of their permits or with excessive water consumption rates.

If EEA prefers to stick with its current approach to Baseline, we would point out that a major reason for the disparity in the Baseline values is the incorporation of registered volumes into the Baseline definition. As we understand it, the rationale for including registrations in the Baseline is that DEP has historically allowed permittees the flexibility to transfer pumping between registered and permitted sources. We understand that DEP is reluctant to do anything that “infringes” on registered volumes, but would point out that even if a baseline were set below registered volume, there is no implication in the SWMI process that an applicant requesting their registered volume would be denied that volume. Rather a registered volume in excess of baseline would simply be subjected to a more careful review and would be conditioned to mitigate impacts in the same manner as any other request of a similar magnitude.

This kind of conditioning seems legally compatible with the fact that all applications under the WMA are, by definition, permit applications and the conditions are permit conditions. Furthermore, the fact that most registered sources are both registered and permitted also supports stricter conditioning (under review Tiers 2, 3 or 4, when appropriate) since DEP would be conditioning the permit for the registered volume rather than the registration itself. If DEP were concerned about the legality of requiring Tier 2 or 3 review for a registered volume (a conclusion we do not support), the problem could be addressed by appropriately modifying the regulations to address this point as has been recommended by the court. Lastly, if an applicant comes forward who has a registered source which is not permitted, there is no logical rationale for including this volume in the baseline for a permit application, and any such registered volume should therefore be excluded from the permit baseline.

#### **Mitigation Requirements for Flow Level 4 and 5**

Where mitigation is required it should be measured and enforced on a quantitative gallon for gallon basis. Verifiable mitigation of at 2:1 should be required to ensure

improvement of our most stressed streams. In our experience a 2:1 mitigation ratio is also needed to ensure that the actual mitigation delivered approximates a 1:1 ratio on the ground.

Significant additional clarification and detail is needed in the proposed Offset/Mitigation Action Table. A number of the items on the mitigation table such as adopting an enterprise fund, demand management measures, and complying with MS4 requirements, among others, are either actions that should be considered minimization, or which are insufficiently quantitative to be counted as mitigation.

For example, the MS4 permit has not been finalized, the draft MS4 permit conditions are focused on quality not quantity, and the requirements vary substantially from community to community depending on the applicable permit region, TMDLs and residual designation. If a WMA permittee proposes to use stormwater improvements to meet their mitigation requirements, they should develop a specific plan with quantitative goals such as annual gallons of increased recharge, or acres of existing impervious cover to be disconnected in a given sub-basin. A general commitment to “comply with MS4 requirements” is not sufficiently detailed to establish whether mitigation requirements have been satisfied under the WMA. While we have no objection to the perception of “double dipping” that is implied when a single action counts as compliance with two different permit programs, we do object to simply substituting vague, and unrelated water quality requirements for quantitative, verifiable mitigation that should be required under the WMA.

A number of the items offered in the Offset Mitigation Table are demand management measures. While demand management activities are critical to avoiding the need for increased withdrawals and thereby avoiding the need for mitigation, demand management in and of itself cannot be considered mitigation, but should instead be listed as a minimization measure. An infinite amount of very effective demand management will accomplish nothing in terms of stream protection if at the end of the day withdrawals still increase. This problem is illustrated exceedingly well in a number of Neponset communities which are partially supplied from local sources and partially supplied from MWRA sources. In these situations, without appropriate permit conditions being imposed by DEP the “benefits” of effective demand management measures will accrue to the MWRA system rather than to local sources both because local sources are generally cheaper to operate, and because MWRA service agreements generally require communities to maximize the use of their local sources.

This problem of demand management vs. mitigation also makes it critical that where mitigation is required, it must have already been implemented before the increased withdrawals commence. This is necessary to prevent increased impacts to streams, and to the extent that demand management continues to be an option in the Offset/Mitigation Table, provides an adaptive management tool to identify when a proposed mitigation plan needs to be revised to incorporate additional measures. In other words, if a mitigation plan calls for demand management as mitigation, and the proposed demand management activities fail to prevent an increase in withdrawal levels, then the mitigation plan needs to be revised to incorporate stricter demand management measures and/or non-demand management offsets, in order to ensure that

the required level of mitigation is actually accomplished. See additional comments under “Demand Management Plans,” below.

Lastly we would observe that some elements offered in the Offset/Mitigation Table are unrelated to water volume, such as habitat improvement or dam removal projects. While we are supportive of including non-volumetric options in the range of available options, we are deeply concerned with the prospect that counting such measures as mitigation will lead to continued net loss of streamflow. What good is a fish ladder if there is insufficient flow for the fish to use it? We would therefore recommend several principles that should be incorporated into Offset/Mitigation table to minimize this risk. First we recommend adopting a rule of thumb that established a preference for at least 80% of mitigation measures to be based on verifiable, volumetric approaches. Second, EEA should require that where non-volumetric mitigation is proposed, DFW be required to make a finding that the non-volumetric mitigation would have a larger benefit to stream health than available volumetric alternatives. Lastly, EEA should require that where non-volumetric mitigation is proposed, the applicant must be the primary funder of the proposed project. Communities should not be relieved of their obligation to mitigate increased withdrawals in situations where a habitat restoration project would have moved forward anyway.

#### **Minimization Requirements for Flow Level 4 and 5**

For streams rated Flow Level 4 or 5, minimization is required in Tier 1. The list of eight required minimization options that applicants must evaluate in Tier 1 is excellent, and is in fact significantly clearer than the Offset/ Mitigation Table. However, because Baseline allocates at least 8% more than 2003 - 2005 use (which use was typically higher than current use due to recent improvements in water use efficiency) the proposed SWMI framework authorizes increasing withdrawals at the same time as it requires minimizing withdrawals, a seeming contradiction. The proposal provides no guarantee that “minimization” will in fact reduce stream impacts.

We are very concerned about the process that applicants will be allowed to use to develop their minimization plans, and the degree to which these will be subject to agency and public review. It is notable that the Tier I minimization requirements lack the phrase “in consultation with agencies” which is applied to other Tiers. It is unreasonable to expect permittees to develop a minimization plan for themselves (in effect, a voluntary minimization plan) that will involve any actions that are at all inconvenient for the applicant.

It is also critical that EEA develop more detailed guidance for the development of minimization plans, that members of the public have the opportunity to review and comment on such plans, that agencies review these plans carefully, and that agencies reserve the right to reject plans which are inadequate. It is particularly important that guidance be developed for effective water rate structures, and for radio meter-reading systems that make increased summertime rates feasible. A policy for managing private well withdrawals (such as requiring that irrigation restrictions apply to all irrigation systems regardless of the water source) is also needed, lest progressive water rates drive consumers to install more private wells.

We are also concerned that there is no requirement that minimization efforts actually reduce stream impacts. At a minimum, permittees should be required to demonstrate, preferably with a quantitative estimate, that their proposed minimization plan is likely to result in improvement of streamflows.

As discussed above, the Association believes that the demand management measures listed on the mitigation chart should be considered minimization measures rather than mitigation measures. We also believe that development of strong demand management plans will be critical to the overall success of the SWMI minimization requirements. As part of developing further guidance on the preparation of minimization plans, EEA should pay special attention to laying out a strong framework for demand management planning.

#### **Tier Requirements for Flow Level 4 and 5**

As currently proposed, the performance standard for a Tier 3 request in a Flow 4 or 5 sub-basin is more lenient than the performance standard for a Tier 4 request that triggers backsliding. At a minimum, the Tier 4 requirements should be equal to the Tier 3 requirements in Flow Levels 4 and 5.

#### **Tier Requirements for Quality Natural Resources**

We agree that it is appropriate that the Tiers Table places special emphasis on protecting Quality Natural Resources including cold water fishery resources (CFRs) and sub-basins in Biological Category 1, 2 and 3. However, we are concerned that the performance standards for QNR in the various Tiers are not adequate.

As currently defined, a CFR is defined based on the presence of cold water fish species. However, we would observe that several areas of the Neponset River Watershed have been identified as known former cold water fishery resources that still offer suitable habitat conditions but no longer support cold water fish due to water withdrawals. Where such situations exist, special attention should be given to evaluating the potential to restore the lost CFR resource, wherever feasible. EEA should therefore reserve the right to designate a CFR in an area where cold water species may no longer be present due to existing water withdrawal impacts.

The Tiers Table currently provides inconsistent levels of protection for various Flow Levels and Biological Categories across the Tiers. We would recommend the following changes to the Tiers Table to better protect QNRs:

In Tier 1 where a QNR is present, the Flow level 4 and 5 requirements should be applied at all flow levels (i.e. Flow 1-5); in other words, impacts should be minimized to the greatest extent feasible. At a bare minimum, a desktop pumping analysis should be required for all Flow Levels, not just Flows 4 and 5. This recommendation is made in light of the limitations in the Baseline methodology that were discussed above. In Tier 2 where a QNR is present, impacts should be “mitigated commensurate with impact” rather than simply minimized—the same standard that applies for Flows 4 and 5 in Tier 2. This standard should also apply for Biological Category 2 and 3. At the very least, the current requirement to minimize should be applied to CFRs in any Flow Level and Biological Category 1-3.



In Tier 4 where a QNR is present, EEA should clarify the meaning of “highest level of review.” How is “highest level of review” different from demonstrating “no feasible source that is less environmentally harmful?”

### **Tier Requirements for Flow Levels 1-3 with No QNR**

We are also concerned that as currently constructed, the Tiers Table provides only limited protection for sub-basins in Flow Levels 1-3 when a QNR is not present. In general (especially in FL 1 and 2) this will include those sub-basins that have limited or no pre-existing water withdrawals, but which have some amount of existing pavement. In the Neponset, a number of sub-basins such as Hawes Brook, Purgatory Brook and Pine Tree Brook would fall into this group.

We urge EEA to at least require minimization in Tier 2 and Tier 3 for these streams to help preserve the stream’s position within its existing Flow and Biological Category. This is particularly true for Flow and Biological Category 3 waters where the wider range of permissible depletion allows for substantial diminishment in stream health between the “good end” and “bad end” of the category.

We would also point out that in Tier 4, as currently presented, streams in Flow Level 1 through 3 without a QNR would be allowed to backslide or drop one or more categories without ANY mitigation, if there is not a less harmful source available nearby. While the currently proposed “no feasible alternative” standard would be effective in protecting some streams, it would not be effective in all cases. Streams that would be particularly vulnerable would be those in areas not near other regional sources of supply. Even here in the Neponset River watershed, the Town of Norwood recently attempted to re-open an abandoned local supply, ostensibly to serve as an emergency backup to their primary reliance on the MWRA system. It is unclear what the “feasible alternative” to allowing Norwood to develop this “emergency backup” would have been. All of which is to say that the performance standard for Tier 4 applications in Flow 1-3 without a QNR should be changed by adding a requirement that impacts be “mitigated commensurate with impact” in addition to demonstrating “no feasible alternative source.”

### **Demand Management Plans**

EEA should require the development of demand management plans in the context of Standard Condition #7, as well as in the context of minimization and mitigation plans required by the Tiers. DEP’s historic reliance on “water conservation questionnaires” to document and evaluate the effectiveness of permittee demand management measures has, in our observation, been ineffective in motivating permittees to adopt meaningful demand management programs. To facilitate the development of such plans, EEA needs to develop more specific guidance for preparing a plan in addition to the reference to state water conservation standards.

We very strongly recommend that the time has come for the Commonwealth to create the position of state Water Conservation Director. With demand management being both one of the most important ways to minimize impacts on the environment and lower water bills, it is time for the state to get serious about promoting water conservation, and there needs to be a staff member to lead this effort. We would recommend that this individual be charged with preparing new guidance for the

development of demand management plans, updating the water conservation standards, providing technical assistance to permittees who need to prepare plans, and generally encouraging much more effective demand management across the Commonwealth, including encouraging cross-town collaboration in implementing demand management. Creating such a position should be a priority for EEA using a small portion of the funding being set aside to support SWMI Implementation.

We would specifically recommend that EEA guidance on preparing demand management programs should address the following points:

- Plans should clearly identify the scope of services to be accomplished, including a detailed list of tasks and deliverables and a timeline. The scopes from the recently discontinued Water Conservation Grant program could provide one model for the format of a demand management plan scope.
- All plans should include clearly defined inputs and level of effort, which can be most easily measured in terms of budgeted expenditure per customer account per year, as this is arguably the only quantifiable way to evaluate the level of effort undertaken.
- Plans should include clearly defined expected outputs (changes to policies or pricing, number of rebates issued, changes in GPCD and peak day demand).
- There should be an expectation that failure to implement promised measures will result in appropriate enforcement action.
- We would recommend an expenditure of \$10-\$15 per account per year as being consistent with a robust demand management program that includes annual leak detection (but not repair), fixture rebates, public fixture replacement, an active (staffed) outreach program, and educational mailings and events.
- Require full cost pricing, and provide clearer guidance on what that means to ensure maintenance of infrastructure and promotion of conservation. All communities should be required to institute increasing block rates (minimum ratio of 3:1) with the highest block kicking in at not more than 90,000 gallons per year, or other types of conservation oriented rates such as Water Budget Rates. Communities should also be required to have summer rates that are at least 25% higher (May through September) than in winter.
- In Flow Level 4 and 5 basins, robust demand management programs should be required until such time as the basin is restored to an acceptable Flow Level 3 status.

EEA needs to provide clearer guidance as to what is considered “feasible” in the context of demand management. Virtually all demand management program activities reduce water supplier pumping and treatment costs in the short term and capital costs in the long term, thus making water bills lower than they would otherwise be. However, in the short term most demand management activities will require water suppliers to raise rates to recoup fixed costs. This need to increase rates can sometimes create a political perception problem, even though increasing rates won’t necessarily increase water bills for people who conserve water. MassDEP should provide clear guidance that all demand management activities that lower the cost of water supply, and hence water bills, are feasible even if such measures will raise rates in the short term. Average retail MWRA water rates should be considered a lower bound for “feasible” water rates.

Please refer also to our comments on seasonal watering restrictions below.

### **Standard Condition 3: Wetlands and Vernal Pool Monitoring**

Standard Condition 3 should specify the consequences if monitoring shows adverse impacts from a water withdrawal. Permits should indicate what will be considered adverse impacts and what will be required of the permittee if such impacts occur. In addition, Conservation Commissions should be asked to review the monitoring regularly and inform MassDEP if they believe there are problems. Conservation Commissions should also be formally consulted when permits are up for review or renewal.

### **Standard Condition 4: RGPCD**

An RGPCD of 65 should not be considered satisfactory performance in any Flow Level 3-5 community and attainment of 65 RGPCD should not be recognized as a threshold which relieves an applicant from minimization requirements, or that triggers any reduction in demand management effort. At the time the 65 RGPCD goal was originally adopted by MassDEP several years ago, it was, according to Commissioner Golledge's testimony to the Legislature, selected in part because two-thirds of communities already met this standard.

### **Standard Condition 5: UAW**

There needs to be a standard for measuring unaccounted for water so that every town measures it in the same way. It is unclear to the Association whether such a standard currently exists.

### **Standard Condition 6: Seasonal Limits on Outdoor Watering**

In general we agree that adopting a standard approach to outdoor watering restrictions across the state would be of great benefit. However, we would like to recommend some substantial modifications to the proposed scheme that will make it more effective.

These recommendations grow out of our experience in assisting seven municipalities with the implementation of water conservation outreach and education programs over the last several years and are based on a few key principles and observations:

- It is preferable to restrict seasonal watering based on its impact on streamflow. Thus we recommend moving away from the use of the 65 RGPCD as a way to define a community's watering restriction regime, and instead relying more heavily on the Flow Levels.  
A small set of end users in any community account for a grossly disproportionate share of irrigation water consumption and these users primarily irrigate with automated, generally in-ground, irrigation systems.
- A large portion of these automated irrigators have little or no ability to modify the operating pattern of their irrigation system without professional assistance.
- Many automated irrigation systems are scheduled to activate daily. Supplemental watering once or twice a week is more than adequate for the maintenance of perfect grass.
- It takes a long time to communicate a watering restriction regime to a large population and attain widespread compliance, and therefore it is important that the

restriction regime be consistent from year to year, and change as infrequently as reasonably possible during the course of a year.

- The system of various levels of watering restrictions in many communities is unnecessarily complex and therefore difficult to communicate to the public, which further reduces compliance.

With the above points in mind, we would recommend the following changes to the proposed watering restrictions:

1. The so-called “Streamflow” option based on ABF should be eliminated. As noted above, it is very difficult to secure compliance with rules which are constantly changing. As we understand it, few communities have selected this option as a result.
2. The incorporation of a low flow trigger to protect streams during drought conditions is valuable. However, basing the statistic on historic impacted flow data completely undermines the effectiveness of this important protection. We therefore recommend basing the trigger on simulated flows or on the U.S. Drought Monitor website which uses real time data.
3. The severity of outdoor watering restrictions should be based on impact (i.e. Flow Levels), not on whether a community is over or under 65 RGPCD. It is common for communities operating below 65 RGPCD to have a significant number of residents that continue to irrigate in an extraordinarily wasteful manner. For streams in Flow Level 1 and 2, communities should be largely free to develop their own restrictions irrespective of RGPCD. In Flow Level 3-5 streams, more rigorous restrictions should be required irrespective of RGPCD.
4. More stringent restrictions should be placed on automated, generally in-ground, systems which account for a disproportionate share of irrigation consumption.
5. A “standard restrictions” level should apply year round during “normal” weather conditions. At this level, automated sprinkler systems should be limited to not more than one day per week in Flow Level 3-5 systems and not more than two days per week in Flow 1-2 systems.
6. Under the “standard restrictions” level, we could reluctantly be persuaded to allow use of informal sprinkler systems without any restrictions in Flow Levels 1-2 unless the community itself decides to adopt something more stringent.
7. Once the flow trigger has been activated, a ban on all sprinklers would be activated for Flow Level 3-5 streams. We reluctantly recommend allowance of hand-held hoses even at this level.
8. As conditions continue to worsen, we would leave it to the water supplier to reach its own determination of when to activate a “total water ban” level, the definition of which is self-explanatory.

Restrictions along the lines of what we are proposing have been implemented without good results and without significant consumer objection in several Neponset communities as well as in other areas of the state. This approach would place the focus back on regulating impacts and would create a vastly simpler and more understandable water restriction regime that would be more likely to achieve high levels of compliance over time.

## **Redundant Wells**

While we are reluctant to see new wells put in without permits or permit conditions, we are also aware that requiring such conditions in a town that currently has only registered water could prove a strong disincentive to reducing environmental impacts of old wells. We would therefore support the Redundant Well proposal if clear proof were required that new wells replacing “redundant” wells would improve environmental protection and streamflows in particular.

#### Conclusion

Again, we thank you for commitment to moving the SWMI framework forward, for allowing us to be involved in the SWMI process, and for the opportunity to comment on the proposed SWMI Framework.

Sincerely,

Steven Pearlman  
Advocacy Director